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ART UNIT	**PAPER NUMBER**
2168	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/664,189	THORPE, JONATHAN RICHARD	
	Examiner	Art Unit	
	MAHESH H. DWIVEDI	2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 February 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23 and 27-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23 and 27-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 February 2004* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/6/09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 02/06/2009 has been received, entered into the record, and considered. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Remarks

3. Receipt of Applicant's Amendment, filed on 02/20/2009, is acknowledged. The amendment includes the cancellation of claims 24-26, and the amending of claims 1, 16-17, and 20-22.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claim 21 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The examiner specifically points to **"client system having logic"** as being directed towards nonstatutory subject matter.

The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, function descriptive material per se.

Claim 23 is rejected for incorporating the deficiencies of independent claim 22.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner wherein the invention was made.

7. Claims 1-17, 19-23, and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fanning et al.** (U.S. Patent 6,742,023) in view of **Needham et al.** (U.S. PGPUB 2002/0194256), and further in view of **Kohonen et al.** (Article entitled "Self Organization of a Massive Document Collection").

8. Regarding claim 1, **Fanning** teaches a system comprising:

A) a data network (Column 5, lines 13-40);

B) an information retrieval client system connected to said data network (Column 5, lines 13-40); and

C) a plurality of information item storage nodes connected to the data network (Column 5, lines 29-40);

D) wherein: each storage node comprises a store configured to store a plurality of information items and an indexer (Column 5, lines 13-40, 42-59, Figure 3);

E) the indexer configured to derive data representing an information item, the data representing the information item, when stored, requiring less storage capacity than a corresponding information item (Column 13, lines 6-24);

F) the indexer further configured to send the data representing the information item to the client system via said data network (Column 5, lines 13-40, Column 13, lines 6-24);

The examiner notes that **Fanning** teaches **"a data network"** as "FIG. 1 also shows a network 22 interconnected between the distribution applications 10, 12. As can be seen in FIG. 1, all distribution applications 10, 12 have the same functionality. One user's file transfer client 14 can download files from another user's file transfer server 20, and vice versa" (Column 5, lines 23-29). The examiner further notes that **Fanning** teaches **"an information retrieval client system connected to said data network"** as "FIG. 1 also shows a network 22 interconnected between the distribution applications 10, 12. As can be seen in FIG. 1, all distribution applications 10, 12 have the same functionality. One user's file transfer client 14 can download files from another

user's file transfer server 20, and vice versa" (Column 5, lines 23-29). The examiner further notes that **Fanning** teaches **"a plurality of information item storage nodes connected to the data network"** as "It should be understood in this description that although only two distribution applications 10, 12 communicating with each other are explicitly discussed, any number of distribution applications may be utilized in the system of the present invention. This is shown in FIG. 2 wherein a plurality of client servers, each denoted as C/S 12, are connected to one another in a system. As shown in FIG. 2, once a C/S 12 downloads a file from another C/S 12, it is able to distribute the file downloaded to other C/S 12 applications in the system. The particular components within system of the present invention will now be discussed" (Column 5, lines 29-40). The examiner further notes that **Fanning** teaches **"wherein: each storage node comprises a store configured to store a plurality of information items and an indexer"** as "FIG. 3 illustrates the system of the present invention having a first distribution application 100 and a second distribution application 212, a file index server 300, and a file index 302. Each distribution application 100, 212 preferably includes: a file transfer client 114, 214; a data file repository 116, 216; a graphical user interface 118, 218; a file transfer server 120, 220 and an inventory module 130, 230. Preferably, the data file repository, or repository, 116 shown in FIG. 3 is where the all of the data files to be shared are stored. In the preferred embodiment, the data file repository 116 contains at least one directory on disk drives in a personal computer. In an alternative embodiment, the data file repository 116 may be a database. In another embodiment, the repository 116 may be a network accessible disk drive that the distribution application 100 can access. Alternatively, the repository 116 can also be a collection of directories enabling the user to organize files by type, classification, or attribute" (Column 5, lines 42-59). The examiner further notes that **Fanning** teaches **"the indexer configured to derive data representing an information item, the data representing the information item, when stored, requiring less storage capacity than a corresponding information item"** as "In an alternative embodiment shown in FIG. 9, the distribution application 1100 contains an audio file module 1102, which includes an audio file player 1106, as well as an audio file converter 1104. The audio file

player 1106 plays files located in the data file repository 1116, while the audio file converter 1104 generates audio files either by sampling data from a microphone or tape, or by converting data stored on a CD-ROM or hard disk into a standard compressed audio file format. Converted audio files are placed in the repository 1116, allowing other users in the community to access these new audio files. In addition, the distribution application 1100 may also contain a video file module 1108, which includes a video file player 1111, as well as a video file converter 1110. Much as in the audio example above, video images (either still, or full motion) are converted from external sources to compressed standard formats and are placed in the repository 1116. Likewise, video files in the repository 1116 are displayed to the user by the video file player 1111" (Column 13, lines 6-24). The examiner further notes that **Fanning** teaches **"the indexer further configured to send the data representing the information item to the client system via said data network"** as "FIG. 1 also shows a network 22 interconnected between the distribution applications 10, 12. As can be seen in FIG. 1, all distribution applications 10, 12 have the same functionality. One user's file transfer client 14 can download files from another user's file transfer server 20, and vice versa" (Column 5, lines 23-29) and "In an alternative embodiment shown in FIG. 9, the distribution application 1100 contains an audio file module 1102, which includes an audio file player 1106, as well as an audio file converter 1104. The audio file player 1106 plays files located in the data file repository 1116, while the audio file converter 1104 generates audio files either by sampling data from a microphone or tape, or by converting data stored on a CD-ROM or hard disk into a standard compressed audio file format. Converted audio files are placed in the repository 1116, allowing other users in the community to access these new audio files. In addition, the distribution application 1100 may also contain a video file module 1108, which includes a video file player 1111, as well as a video file converter 1110. Much as in the audio example above, video images (either still, or full motion) are converted from external sources to compressed standard formats and are placed in the repository 1116. Likewise, video files in the repository 1116 are displayed to the user by the video file player 1111" (Column 13, lines 6-24).

Fanning does not explicitly teach:

G) the indexer configured to maintain a register indicative of whether the data representing the information item has previously been transmitted to the client system;

H) to cause data representing information items which have not been previously transmitted to the client system to be forwarded to the client system; and

I) to update the register in accordance with the data representing information items which were forwarded to the client system.

Needham, however, teaches **"the indexer configured to maintain a register indicative of whether the data representing the information item has previously been transmitted to the client system"** as "When a first user in the network wishes to make a file available for sharing with a second user such as a friend, the first user's system sends index information about the file (including a unique and "unguessable" identifier) to the second user's system. When the friend wishes to retrieve the file, the second user's system performs a local search on the second user's system to determine if the second user already has the file. If not, the second user's system makes a request for the selected file according to its identifier (e.g., "who has a copy of file 12345?") from his or her friends via their systems. If the immediate friends do not have the selected file, the friends' systems forward the request on to their friends within the network and so on. Requests may be made to various nodes of the network rather than directly to the creator of the file because a system (e.g., network node) that is "closer" (in the social sense) to the requester than the creator of the file may have a copy of the file and can forward it more easily or more efficiently, because the creator of the file may have deleted the file from the creator's system, or because the network topology may have changed " (Paragraph 15) and "In the example of FIG. 1, Bob's index information packet for Bob's photograph has a DFC field of 0, Andy's index information packet for the photograph has a DFC field of 1 (reflecting the transfer of the index information from Bob to Andy), and Fred's index information packet for the same photograph has a DFC field of 3 (because that index came through June, Mary, and Bob)" (Paragraph 19), **"to cause data representing information items which have not been previously transmitted to the client system to be forwarded to the client**

system" as "When a first user in the network wishes to make a file available for sharing with a second user such as a friend, the first user's system sends index information about the file (including a unique and "unguessable" identifier) to the second user's system. When the friend wishes to retrieve the file, the second user's system performs a local search on the second user's system to determine if the second user already has the file. If not, the second user's system makes a request for the selected file according to its identifier (e.g., "who has a copy of file 12345?") from his or her friends via their systems. If the immediate friends do not have the selected file, the friends' systems forward the request on to their friends within the network and so on. Requests may be made to various nodes of the network rather than directly to the creator of the file because a system (e.g., network node) that is "closer" (in the social sense) to the requester than the creator of the file may have a copy of the file and can forward it more easily or more efficiently, because the creator of the file may have deleted the file from the creator's system, or because the network topology may have changed " (Paragraph 15), and **"to update the register in accordance with the data representing information items which were forwarded to the client system"** as "In the example of FIG. 1, Bob's index information packet for Bob's photograph has a DFC field of 0, Andy's index information packet for the photograph has a DFC field of 1 (reflecting the transfer of the index information from Bob to Andy), and Fred's index information packet for the same photograph has a DFC field of 3 (because that index came through June, Mary, and Bob)" (Paragraph 19).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Needham's** would have allowed **Fanning's** to provide a method to reduce bottlenecking when forwarding file requests in a distributed network, as noted by **Needham** (Paragraph 06).

Fanning and **Needham** do not explicitly teach:

J) said client system includes a node position generating unit configured to generate a node position in respect of each information item represented by said received data

responsive to the data representing the information item received from said indexer of a storage node.

Kohonen, however, teaches **"said client system includes a node position generating unit configured to generate a node position in respect of each information item represented by said received data responsive to the data representing the information item received from said indexer of a storage node"** as "With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582, Section C: Formation of the Document Map), "This time includes finding the keywords to label the map, forming the WWW-ages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map), and "Given a search description, the matching units are found from the index and the best matches are returned and displayed as circles on the map" (Page 584, Section 2: Keyword Search).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Kohonen 's** would have allowed **Fanning's** and **Needham's** to provide a method for help a client understand the true meaning of individual texts and finding information of the highest interest, as noted by **Kohonen** (Section: Introduction).

Regarding claim 2, **Fanning** further teaches a system comprising:
A) wherein said indexer at each storage node is operable to transmit data to said client system to said client system in batches (Column 12, lines 53-67-Column 13, lines 1-5, Figure 8);
B) each batch comprising at least data derived from some of those information items stored at that storage node for which data has not previously been transmitted to said client system (Column 5, lines 60-64).

The examiner notes that **Fanning** teaches **"wherein said indexer at each storage node is operable to transmit data to said client system to said client**

system in batches" as “Alternatively, as shown in FIG. 8, a parallel download module 1002 may be used to improve transfer rates of slow file transfer servers 1004, 1006. The parallel module 1002 would be connected to at least two file transfer servers 1004, 1006 in order to download a given data file. The file to be downloaded from each file transfer server 1004, 1006 must be identical. The parallel download module 1002 requests a different section of the given data file from each of the file transfer servers 1004, 1006 by using a file subsection download request. Thereafter, a completed download is reported when all sections have been successfully downloaded. This allows a high-bandwidth file transfer client 1000 to rapidly download parts of the same file from several lower bandwidth file transfer servers 1004, 1006" (Column 12, lines 53-67-Column 13, lines 1-5). The examiner further notes that **Fanning** teaches **"each batch comprising at least data derived from some of those information items stored at that storage node for which data has not previously been transmitted to said client system"** as "Files obtained from one distribution application 212 to another distribution application 100 are initially stored in the data file repository 116 immediately after being downloaded, making these newly downloaded data files available to other distribution applications (not shown)" (Column 5, lines 60-64).

Regarding claim 3, **Fanning** further teaches a system comprising:
A) wherein each batch of data comprises data derived from those information items stored at that storage node for which data has not previously been transmitted to said client system (Column 5, lines 60-64).

The examiner notes that **Fanning** teaches **"wherein each batch of data comprises data derived from those information items stored at that storage node for which data has not previously been transmitted to said client system"** as "Files obtained from one distribution application 212 to another distribution application 100 are initially stored in the data file repository 116 immediately after being downloaded, making these newly downloaded data files available to other distribution applications (not shown)" (Column 5, lines 60-64).

Regarding claim 4, **Fanning** further teaches a system comprising:
A) wherein said indexer at each storage node is operable to transmit to said client system a batch of data derived from information items stored at that storage node in response to an information retrieval operation at said client system (Column 12, lines 53-67-Column 13, lines 1-5, Figure 8).

The examiner notes that **Fanning** teaches **"wherein said indexer at each storage node is operable to transmit to said client system a batch of data derived from information items stored at that storage node in response to an information retrieval operation at said client system"** as "Alternatively, as shown in FIG. 8, a parallel download module 1002 may be used to improve transfer rates of slow file transfer servers 1004, 1006. The parallel module 1002 would be connected to at least two file transfer servers 1004, 1006 in order to download a given data file. The file to be downloaded from each file transfer server 1004, 1006 must be identical. The parallel download module 1002 requests a different section of the given data file from each of the file transfer servers 1004, 1006 by using a file subsection download request. Thereafter, a completed download is reported when all sections have been successfully downloaded. This allows a high-bandwidth file transfer client 1000 to rapidly download parts of the same file from several lower bandwidth file transfer servers 1004, 1006" (Column 12, lines 53-67-Column 13, lines 1-5).

Regarding claim 5, **Fanning** further teaches a system comprising:
A) wherein said indexer at each storage node is operable to detect an information item which is modified or newly stored at that storage node (Column 6, lines 24-27); and
B) in response to such a detection, to send a batch of data derived from that information item to said client system (Column 6, lines 28-32).

The examiner notes that **Fanning** teaches **"wherein said indexer at each storage node is operable to detect an information item which is modified or newly stored at that storage node"** as "the last modification time shows that the directory has been modified recently, the inventory module 130 checks the contents of the directory to ascertain which files if any have been added or removed" (Column 6, lines

24-27). The examiner notes that **Fanning** teaches **"in response to such a detection, to send a batch of data derived from that information item to said client system"** as "Where the repository 116 is a database, the inventory module 130 uses database triggers to automatically monitor the repository 116 as well as receive file add and file remove events from the database as files are added and removed " (Column 6, lines 28-32).

Regarding claim 6, **Fanning** further teaches a system comprising:
A) wherein said data network is an internet network (Column 2, lines 6-8).

The examiner notes that **Fanning** teaches **" wherein said data network is an internet network"** as "Thus, it can be seen that there is a long-standing need on the Internet for a system that facilitates the distribution of data files in a community of users" (Column 2, lines 6-8).

Regarding claim 7, **Fanning** further teaches a system comprising:
A) wherein one or more of said storage nodes are internet search servers (Column 10, lines 49-65).

The examiner notes that **Fanning** teaches **" wherein said data network is an internet network"** as "FIG. 6 shows the preferred embodiment, where the system of the present invention utilizes a search module 806 for searching the file index, in which a search request submitted by the distribution application 800 is processed and a search response, containing file descriptions matching the search request, is returned to that distribution application 800. When a user wishes to locate a particular data file, the search module 800 constructs a search request to the file index 810 based on the search criteria specified by the user through the distribution application 800. The search criteria can contain a complete filename or a subsection of the filename, limitations on any of the fields of ancillary data, the file size, or limitations on the file transfer server including bandwidth to network or percentage of successful downloads. The index server 808 executes the search request, prunes the file descriptions as appropriate, and displays the search response to the users" (Column 10, lines 49-65).

Regarding claim 8, **Fanning** further teaches a system comprising:
A) wherein said information items are at least partially textual (Column 10, lines 34-36); and
B) said data derived form a stored information item comprises the whole of said textual content of that information item (Column 10, lines 34-36).

The examiner notes that **Fanning** teaches **"wherein said information items are at least partially textual"** as " The index server also optionally stores information for each file description such as: filename; file data type (text, audio, images, video, etc)" (Column 10, lines 34-36). The examiner further notes that **Kohonen** teaches **"said data derived form a stored information item comprises the whole of said textual content of that information item"** as " The index server also optionally stores information for each file description such as: filename; file data type (text, audio, images, video, etc)" (Column 10, lines 34-36).

Regarding claim 9, **Fanning** further teaches a system comprising:
A) wherein said data derived from a stored information item comprises textual data indicative of said content of the stored information item (Column 5, lines 66-67-Column 6, lines 1-8).

The examiner notes that **Fanning** teaches **"wherein said data derived from a stored information item comprises textual data indicative of said content of the stored information item"** as "A description of each file placed in the file repository 116 is automatically made available by an inventory module 130 in the distribution application 100 to other distribution applications 212 in the community. In the preferred embodiment, the inventory module 130 verifies that each file is a valid file of the types of files available for distribution. The inventory module 130 also extracts a title of the data file, the size of the data file, the type of data file, any text associated with the data file, the creator of the data file and the quality rating of the data file" (Column 5, lines 66-67-Column 6, lines 1-8).

Regarding claim 10, **Fanning** and **Needham** do not explicitly teach a system comprising:

A) wherein said client system comprises a graphical user interface for displaying a representation of at least some of said nodes as a two-dimensional display array of display points within a display area on. a user display.

Kohonen, however, teaches **"wherein said client system comprises a graphical user interface for displaying a representation of at least some of said nodes as a two-dimensional display array of display points within a display area on a user display"** as "documents are presented as points on a two- dimensional (2-D) plane and the geometric relations of the image points of the documents represent their similarity relations" (Page 574) and “Forming the user interface automatically took an additional week of computation. This time includes finding the keywords to label the map, forming the WWW-pages that are used in exploring the map, and indexing the map units for keyword searches” (Page 583).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Kohonen 's** would have allowed **Fanning's** and **Needham’s** to provide a method for help a client understand the true meaning of individual texts and finding information of the highest interest, as noted by **Kohonen** (Section: Introduction).

Regarding claim 11, **Fanning** and **Needham** do not explicitly teach a system comprising:

A) wherein said client system comprises: (i) a user control for defining a two-dimensional region of said display area; and

B) a detector for detecting those display points lying within said two-dimensional region of said display area.

Kohonen, however, teaches **"wherein said client system comprises: (i) a user control for defining a two-dimensional region of said display area"** as “Forming the user interface automatically took an additional week of computation. This time includes finding the keywords to label the map, forming the WWW-pages that are

used in exploring the map, and indexing the map units for keyword searches" (Page 583) and "keyword search" (Page 584) and **"a detector for detecting those display points "lying within said two-dimensional region of said display area"** as "Forming the user interface automatically took an additional week of computation. This time includes finding the keywords to label the map, forming the WWW-pages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583) and "An example of performing a keyword search is depicted in Fig. 6" (Page 584, Section: Keyword Search).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Kohonen 's** would have allowed **Fanning's** and **Needham's** to provide a method for help a client understand the true meaning of individual texts and finding information of the highest interest, as noted by **Kohonen** (Section: Introduction).

Regarding claim 12, **Fanning** and **Needham** do not explicitly teach a system comprising:
A) wherein said graphical user interface is operable to display a list of data representing information items, being those information items mapped onto nodes corresponding to display points displayed within said two-dimensional region of said display area.

Kohonen, however, teaches "**wherein said graphical user interface is operable to display a list of data representing information items, being those information items mapped onto nodes corresponding to display points displayed within said two-dimensional region of said display area"** as "This time includes finding the keywords to label the map, forming the WWW-pages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map) and "When clicking a point on the map display with a mouse, links to the document database enable reading the contents of the documents" (Page 583, Section E: Exploration of the Document Map). The

examiner further notes that Figure 5 clearly shows an interface With nodes mapping different documents.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Kohonen 's** would have allowed **Fanning's** and **Needham's** to provide a method for help a client understand the true meaning of individual texts and finding information of the highest interest, as noted by **Kohonen** (Section: Introduction).

Regarding claim 13, **Fanning** and **Needham** do not explicitly teach a system comprising:
A) wherein said client system comprises a user control for choosing one or more information items from said list; and
B) said graphical user interface being operable to alter manner of display within said display area of display points corresponding to selected information items.

Kohonen, however, teaches **"wherein said client system comprises a user control for choosing one or more information items from said list"** as "Forming the user interface automatically took an additional week of computation. This time includes finding the keywords to label the map, forming the WWW-pages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583), "This time includes finding the keywords to label the map, forming the WWW- pages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map), and "When clicking a point on the map display with a mouse, links to the document database enable reading the contents of the documents" (Page 583, Section E: Exploration of the Document Map) and **"said graphical user interface being operable to alter manner of display within said display area of display points corresponding to selected information items"** as "Forming the user interface automatically took an additional week of computation. This time includes finding the keywords to label the map, forming the WWW-pages that are used in exploring the map, and indexing the map units for keyword searches" (Page

583), "This time includes finding the keywords to label the map, forming the WWW-pages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map), and "When clicking a point on the map display with a mouse, links to the document database enable reading the contents of the documents" (Page 583, Section E: Exploration of the Document Map). The examiner further notes that Figure 6 clearly shows the ability to alter the interface by zooming in (see "Click any area on the map to get a zoomed view!").

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Kohonen 's** would have allowed **Fanning's** and **Needham's** to provide a method for help a client understand the true meaning of individual texts and finding information of the highest interest, as noted by **Kohonen** (Section: Introduction).

Regarding claim 14, **Fanning** further teaches a system comprising:
A) wherein said data derived from an information item includes an identification of said storage location of that information item (Column 3, lines 8-12).

The examiner notes that **Fanning** teaches **"wherein said data derived from an information item includes an identification of said storage location of that information item"** as "The file description comprises any of the following: a title of the data file, the size of the data file, the type of data file, any text associated with the data file, the creator of the data file, the quality rating of the data file, and the distribution application where the data file resides" (Column 3, lines 8-12).

Regarding claim 15, **Fanning** and **Needham** do not explicitly teach a system comprising:
A) wherein said identification comprises a universal resource indicator (URI).

Kohonen teaches **"wherein said identification comprises a universal resource indicator (URI)"** as "This time includes finding the keywords to label the map, forming the WWW-pages that are used in exploring the map, and indexing the map

units for keyword searches" (Page 583, Section C: Formation of the Document Map) and "When clicking a point on the map display with a mouse, links to the document database enable reading the contents of the documents" (Page 583, Section E: Exploration of the Document Map).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Kohonen 's** would have allowed **Fanning's** and **Needham's** to provide a method for help a client understand the true meaning of individual texts and finding information of the highest interest, as noted by **Kohonen** (Section: Introduction).

Regarding claim 16, **Fanning** teaches an information storage node comprising:
A) said storage node being connected via a data network to an information retrieval client system (Column 5, lines 13-40); and
C) the storage node comprising: a store configured to store a plurality of information items and an indexer (Column 5, lines 42-59, Figure 3);
E) the indexer configured to derive data representing an information item, the data representing the information item, when stored, requiring less storage capacity than a corresponding information item (Column 13, lines 6-24);
F) the indexer further configured to send the data representing the information item to the client system via said data network (Column 5, lines 13-40, Column 13, lines 6-24);

The examiner notes that **Fanning** teaches **"said storage node being connected via a data network to an information retrieval client system"** as "FIG. 1 also shows a network 22 interconnected between the distribution applications 10, 12. As can be seen in FIG. 1, all distribution applications 10, 12 have the same functionality. One user's file transfer client 14 can download files from another user's file transfer server 20, and vice versa" (Column 5, lines 23-29). The examiner further notes that **Fanning** teaches **"the storage node comprising: a store configured to store a plurality of information items and an indexer"** as "FIG. 3 illustrates the system of the present invention having a first distribution application 100 and a second distribution application 212, a file index server 300, and a file index 302. Each distribution

application 100, 212 preferably includes: a file transfer client 114, 214; a data file repository 116, 216; a graphical user interface 118, 218; a file transfer server 120, 220 and an inventory module 130, 230. Preferably, the data file repository, or repository, 116 shown in FIG. 3 is where the all of the data files to be shared are stored. In the preferred embodiment, the data file repository 116 contains at least one directory on disk drives in a personal computer. In an alternative embodiment, the data file repository 116 may be a database. In another embodiment, the repository 116 may be a network accessible disk drive that the distribution application 100 can access. Alternatively, the repository 116 can also be a collection of directories enabling the user to organize files by type, classification, or attribute" (Column 5, lines 42-59). The examiner further notes that **Fanning** teaches **"the indexer configured to derive data representing an information item, the data representing the information item, when stored, requiring less storage capacity than a corresponding information item"** as "In an alternative embodiment shown in FIG. 9, the distribution application 1100 contains an audio file module 1102, which includes an audio file player 1106, as well as an audio file converter 1104. The audio file player 1106 plays files located in the data file repository 1116, while the audio file converter 1104 generates audio files either by sampling data from a microphone or tape, or by converting data stored on a CD-ROM or hard disk into a standard compressed audio file format. Converted audio files are placed in the repository 1116, allowing other users in the community to access these new audio files. In addition, the distribution application 1100 may also contain a video file module 1108, which includes a video file player 1111, as well as a video file converter 1110. Much as in the audio example above, video images (either still, or full motion) are converted from external sources to compressed standard formats and are placed in the repository 1116. Likewise, video files in the repository 1116 are displayed to the user by the video file player 1111" (Column 13, lines 6-24). The examiner further notes that **Fanning** teaches **"the indexer further configured to send the data representing the information item to the client system via said data network"** as "FIG. 1 also shows a network 22 interconnected between the distribution applications 10, 12. As can be seen in FIG. 1, all distribution applications 10, 12 have the same

functionality. One user's file transfer client 14 can download files from another user's file transfer server 20, and vice versa" (Column 5, lines 23-29) and "In an alternative embodiment shown in FIG. 9, the distribution application 1100 contains an audio file module 1102, which includes an audio file player 1106, as well as an audio file converter 1104. The audio file player 1106 plays files located in the data file repository 1116, while the audio file converter 1104 generates audio files either by sampling data from a microphone or tape, or by converting data stored on a CD-ROM or hard disk into a standard compressed audio file format. Converted audio files are placed in the repository 1116, allowing other users in the community to access these new audio files. In addition, the distribution application 1100 may also contain a video file module 1108, which includes a video file player 1111, as well as a video file converter 1110. Much as in the audio example above, video images (either still, or full motion) are converted from external sources to compressed standard formats and are placed in the repository 1116. Likewise, video files in the repository 1116 are displayed to the user by the video file player 1111" (Column 13, lines 6-24).

Fanning does not explicitly teach:

G) the indexer configured to maintain a register indicative of whether the data representing the information item has previously been transmitted to the client system;

H) to cause data representing information items which have not previously been transmitted to the client system to be forwarded to the client system; and

I) to update the register in accordance with the data representing information items which were forwarded to the client system.

Needham, however, teaches **"the indexer configured to maintain a register indicative of whether the data representing the information item has previously been transmitted to the client system"** as "When a first user in the network wishes to make a file available for sharing with a second user such as a friend, the first user's system sends index information about the file (including a unique and "unguessable" identifier) to the second user's system. When the friend wishes to retrieve the file, the second user's system performs a local search on the second user's system to determine if the second user already has the file. If not, the second user's system

makes a request for the selected file according to its identifier (e.g., "who has a copy of file 12345?") from his or her friends via their systems. If the immediate friends do not have the selected file, the friends' systems forward the request on to their friends within the network and so on. Requests may be made to various nodes of the network rather than directly to the creator of the file because a system (e.g., network node) that is "closer" (in the social sense) to the requester than the creator of the file may have a copy of the file and can forward it more easily or more efficiently, because the creator of the file may have deleted the file from the creator's system, or because the network topology may have changed " (Paragraph 15) and “In the example of FIG. 1, Bob's index information packet for Bob's photograph has a DFC field of 0, Andy's index information packet for the photograph has a DFC field of 1 (reflecting the transfer of the index information from Bob to Andy), and Fred's index information packet for the same photograph has a DFC field of 3 (because that index came through June, Mary, and Bob)” (Paragraph 19), **“to cause data representing information items which have not been previously transmitted to the client system to be forwarded to the client system”** as "When a first user in the network wishes to make a file available for sharing with a second user such as a friend, the first user's system sends index information about the file (including a unique and "unguessable" identifier) to the second user's system. When the friend wishes to retrieve the file, the second user's system performs a local search on the second user's system to determine if the second user already has the file. If not, the second user's system makes a request for the selected file according to its identifier (e.g., "who has a copy of file 12345?") from his or her friends via their systems. If the immediate friends do not have the selected file, the friends' systems forward the request on to their friends within the network and so on. Requests may be made to various nodes of the network rather than directly to the creator of the file because a system (e.g., network node) that is "closer" (in the social sense) to the requester than the creator of the file may have a copy of the file and can forward it more easily or more efficiently, because the creator of the file may have deleted the file from the creator's system, or because the network topology may have changed " (Paragraph 15), and **“to update the register in accordance with the data representing**

information items which were forwarded to the client system" as "In the example of FIG. 1, Bob's index information packet for Bob's photograph has a DFC field of 0, Andy's index information packet for the photograph has a DFC field of 1 (reflecting the transfer of the index information from Bob to Andy), and Fred's index information packet for the same photograph has a DFC field of 3 (because that index came through June, Mary, and Bob)" (Paragraph 19).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Needham's** would have allowed **Fanning's** to provide a method to reduce bottlenecking when forwarding file requests in a distributed network, as noted by **Needham** (Paragraph 06).

Fanning and **Needham** do not explicitly teach:
B) including a node position generating unit configured to generate a node position in respect of each information item represented by said received data responsive to data received from said storage node.

Kohonen, however, teaches **"including a node position generating unit configured to generate a node position in respect of each information item represented by said received data responsive to data received from said storage node"** as "With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582, Section C: Formation of the Document Map), "This time includes finding the keywords to label the map, forming the WWW-ages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map), and "Given a search description, the matching units are found from the index and the best matches are returned and displayed as circles on the map" (Page 584, Section 2: Keyword Search).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Kohonen 's** would have allowed **Fanning's** and **Needham's** to provide a method for

help a client understand the true meaning of individual texts and finding information of the highest interest, as noted by **Kohonen** (Section: Introduction).

Regarding claim 17, **Fanning** teaches an information retrieval client system comprising:

A) said client system being connectable via a data network to one or more information item storage nodes each comprising a store for storing a plurality of information items and an indexer (Column 5, lines 13-40, lines 42-59, Figure 3);

B) the indexer configured to derive data representing an information item, the data representing the information item, when stored, requiring less storage capacity than a corresponding information item (Column 13, lines 6-24);

C) the indexer further configured to send the data representing the information item to the client system via said data network (Column 5, lines 13-40, Column 13, lines 6-24);

The examiner notes that **Fanning** teaches **"said client system being connectable via a data network to one or more information item storage nodes each comprising a store for storing a plurality of information items and an indexer"** as "FIG. 1 also shows a network 22 interconnected between the distribution applications 10, 12. As can be seen in FIG. 1, all distribution applications 10, 12 have the same functionality. One user's file transfer client 14 can download files from another user's file transfer server 20, and vice versa" (Column 5, lines 23-29) and "FIG. 3 illustrates the system of the present invention having a first distribution application 100 and a second distribution application 212, a file index server 300, and a file index 302. Each distribution application 100, 212 preferably includes: a file transfer client 114, 214; a data file repository 116, 216; a graphical user interface 118, 218; a file transfer server 120, 220 and an inventory module 130, 230. Preferably, the data file repository, or repository, 116 shown in FIG. 3 is where the all of the data files to be shared are stored. In the preferred embodiment, the data file repository 116 contains at least one directory on disk drives in a personal computer. In an alternative embodiment, the data file repository 116 may be a database. In another embodiment, the repository 116 may be a network accessible disk drive that the distribution application 100 can access.

Alternatively, the repository 116 can also be a collection of directories enabling the user to organize files by type, classification, or attribute" (Column 5, lines 42-59). The examiner further notes that **Fanning** teaches **"the indexer configured to derive data representing an information item, the data representing the information item, when stored, requiring less storage capacity than a corresponding information item"** as "In an alternative embodiment shown in FIG. 9, the distribution application 1100 contains an audio file module 1102, which includes an audio file player 1106, as well as an audio file converter 1104. The audio file player 1106 plays files located in the data file repository 1116, while the audio file converter 1104 generates audio files either by sampling data from a microphone or tape, or by converting data stored on a CD-ROM or hard disk into a standard compressed audio file format. Converted audio files are placed in the repository 1116, allowing other users in the community to access these new audio files. In addition, the distribution application 1100 may also contain a video file module 1108, which includes a video file player 1111, as well as a video file converter 1110. Much as in the audio example above, video images (either still, or full motion) are converted from external sources to compressed standard formats and are placed in the repository 1116. Likewise, video files in the repository 1116 are displayed to the user by the video file player 1111" (Column 13, lines 6-24). The examiner further notes that **Fanning** teaches **"the indexer further configured to send the data representing the information item to the client system via said data network"** as "FIG. 1 also shows a network 22 interconnected between the distribution applications 10, 12. As can be seen in FIG. 1, all distribution applications 10, 12 have the same functionality. One user's file transfer client 14 can download files from another user's file transfer server 20, and vice versa" (Column 5, lines 23-29) and "In an alternative embodiment shown in FIG. 9, the distribution application 1100 contains an audio file module 1102, which includes an audio file player 1106, as well as an audio file converter 1104. The audio file player 1106 plays files located in the data file repository 1116, while the audio file converter 1104 generates audio files either by sampling data from a microphone or tape, or by converting data stored on a CD-ROM or hard disk into a standard compressed audio file format. Converted audio files are placed in the

repository 1116, allowing other users in the community to access these new audio files. In addition, the distribution application 1100 may also contain a video file module 1108, which includes a video file player 1111, as well as a video file converter 1110. Much as in the audio example above, video images (either still, or full motion) are converted from external sources to compressed standard formats and are placed in the repository 1116. Likewise, video files in the repository 1116 are displayed to the user by the video file player 1111" (Column 13, lines 6-24).

Fanning does not explicitly teach:

D) the indexer configured to maintain a register indicative of whether the data representing the information item has previously been transmitted to the client system;

E) to cause data representing information items which have not previously been transmitted to the client system to be forwarded to the client system; and

F) to update the register in accordance with the data representing information items which were forwarded to the client system.

Needham, however, teaches **"the indexer configured to maintain a register indicative of whether the data representing the information item has previously been transmitted to the client system"** as "When a first user in the network wishes to make a file available for sharing with a second user such as a friend, the first user's system sends index information about the file (including a unique and "unguessable" identifier) to the second user's system. When the friend wishes to retrieve the file, the second user's system performs a local search on the second user's system to determine if the second user already has the file. If not, the second user's system makes a request for the selected file according to its identifier (e.g., "who has a copy of file 12345?") from his or her friends via their systems. If the immediate friends do not have the selected file, the friends' systems forward the request on to their friends within the network and so on. Requests may be made to various nodes of the network rather than directly to the creator of the file because a system (e.g., network node) that is "closer" (in the social sense) to the requester than the creator of the file may have a copy of the file and can forward it more easily or more efficiently, because the creator of the file may have deleted the file from the creator's system, or because the network

topology may have changed " (Paragraph 15) and “In the example of FIG. 1, Bob's index information packet for Bob's photograph has a DFC field of 0, Andy's index information packet for the photograph has a DFC field of 1 (reflecting the transfer of the index information from Bob to Andy), and Fred's index information packet for the same photograph has a DFC field of 3 (because that index came through June, Mary, and Bob)” (Paragraph 19), **“to cause data representing information items which have not been previously transmitted to the client system to be forwarded to the client system”** as "When a first user in the network wishes to make a file available for sharing with a second user such as a friend, the first user's system sends index information about the file (including a unique and "unguessable" identifier) to the second user's system. When the friend wishes to retrieve the file, the second user's system performs a local search on the second user's system to determine if the second user already has the file. If not, the second user's system makes a request for the selected file according to its identifier (e.g., "who has a copy of file 12345?") from his or her friends via their systems. If the immediate friends do not have the selected file, the friends' systems forward the request on to their friends within the network and so on. Requests may be made to various nodes of the network rather than directly to the creator of the file because a system (e.g., network node) that is "closer" (in the social sense) to the requester than the creator of the file may have a copy of the file and can forward it more easily or more efficiently, because the creator of the file may have deleted the file from the creator's system, or because the network topology may have changed " (Paragraph 15), and **“to update the register in accordance with the data representing information items which were forwarded to the client system”** as “In the example of FIG. 1, Bob's index information packet for Bob's photograph has a DFC field of 0, Andy's index information packet for the photograph has a DFC field of 1 (reflecting the transfer of the index information from Bob to Andy), and Fred's index information packet for the same photograph has a DFC field of 3 (because that index came through June, Mary, and Bob)” (Paragraph 19).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching

Needham's would have allowed **Fanning's** to provide a method to reduce bottlenecking when forwarding file requests in a distributed network, as noted by **Needham** (Paragraph 06).

Fanning and **Needham** do not explicitly teach:

G) the client system comprising a node position generating unit configured to generate a node position in respect of each information item represented by said received data responsive to data received from said indexer of a storage node.

Kohonen, however, teaches **"the client system comprising a node position generating unit configured to generate a node position in respect of each information item represented by said received data responsive to data received from said indexer of a storage node"** as "With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582, Section C: Formation of the Document Map), "This time includes finding the keywords to label the map, forming the WWW-ages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map), and "Given a search description, the matching units are found from the index and the best matches are returned and displayed as circles on the map" (Page 584, Section 2: Keyword Search).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Kohonen 's** would have allowed **Fanning's** and **Needham's** to provide a method for help a client understand the true meaning of individual texts and finding information of the highest interest, as noted by **Kohonen** (Section: Introduction).

Regarding claim 18, **Fanning** does not explicitly teach an information client retrieval system comprising:

A) a portable data processing device.

Needham, however, teaches **"a portable data processing device"** as "Embodiments of the present invention comprise a network of file storage systems,

each system having index information about at least some of the files in the network, and each system having the ability to communicate with a subset of nodes in the network (for example, a user of a file storage system may communicate with his or her friends and family via their file storage systems). In various embodiments, a file storage system may be a personal computer (PC), an engineering workstation, a set top box, a personal digital assistant (PDA), a cellular phone, a mainframe computer, an Internet appliance, or any other device for storing and accessing file data via a communications network" (Paragraph 14).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Needham's** would have allowed **Fanning's** to provide a method to reduce bottlenecking when forwarding file requests in a distributed network, as noted by **Needham** (Paragraph 06).

Regarding claim 19, **Fanning** further teaches an information retrieval client system comprising:

A) A video acquisition and/or processing apparatus comprising the client system according to claim 17 (Column 13, lines 16-24).

The examiner notes that **Fanning** teaches **"A video acquisition and/or processing apparatus comprising the client system according to claim 17"** as "video retrieval, our current interfaces segment video into shots; and represent them with single frames" (Page 1 ,Section 1, Figure 1).

Regarding claim 20, **Fanning** teaches an information retrieval method comprising:

A) one or more information item storage nodes connected to said data network (Column 5, lines 13-40);

B) storing a plurality of information items at each storage node (Column 42-59, Figure 3);

C) generating by each storage node data representing an information item stored at that storage node, the data representing the information item, when stored, requiring less storage capacity than a corresponding information item (Column 5, lines 13-40, 42-59, Figure 3).

The examiner notes that **Fanning** teaches **"one or more information item storage nodes connected to said data network"** as "FIG. 1 also shows a network 22 interconnected between the distribution applications 10, 12. As can be seen in FIG. 1, all distribution applications 10, 12 have the same functionality. One user's file transfer client 14 can download files from another user's file transfer server 20, and vice versa" (Column 5, lines 23-29). The examiner further notes that **Fanning** teaches **"storing a plurality of information items at each storage node"** as "FIG. 3 illustrates the system of the present invention having a first distribution application 100 and a second distribution application 212, a file index server 300, and a file index 302. Each distribution application 100, 212 preferably includes: a file transfer client 114, 214; a data file repository 116, 216; a graphical user interface 118, 218; a file transfer server 120, 220 and an inventory module 130, 230. Preferably, the data file repository, or repository, 116 shown in FIG. 3 is where the all of the data files to be shared are stored. In the preferred embodiment, the data file repository 116 contains at least one directory on disk drives in a personal computer. In an alternative embodiment, the data file repository 116 may be a database. In another embodiment, the repository 116 may be a network accessible disk drive that the distribution application 100 can access. Alternatively, the repository 116 can also be a collection of directories enabling the user to organize files by type, classification, or attribute" (Column 5, lines 42-59). The examiner further notes that **Fanning** teaches **"generating by each storage node data representing an information item stored at that storage node, the data representing the information item, when stored, requiring less storage capacity than a corresponding information item"** as "In an alternative embodiment shown in FIG. 9, the distribution application 1100 contains an audio file module 1102, which includes an audio file player 1106, as well as an audio file converter 1104. The audio file player 1106 plays files located in the data file repository 1116, while the audio file

converter 1104 generates audio files either by sampling data from a microphone or tape, or by converting data stored on a CD-ROM or hard disk into a standard compressed audio file format. Converted audio files are placed in the repository 1116, allowing other users in the community to access these new audio files. In addition, the distribution application 1100 may also contain a video file module 1108, which includes a video file player 1111, as well as a video file converter 1110. Much as in the audio example above, video images (either still, or full motion) are converted from external sources to compressed standard formats and are placed in the repository 1116. Likewise, video files in the repository 1116 are displayed to the user by the video file player 1111" (Column 13, lines 6-24).

Fanning does not explicitly teach:

D) maintaining by an indexer of each storage node a register indicative of whether the data representing the information item has previously been transmitted to the client system;

E) forwarding data representing information items which have not previously been transmitted to the client system from the storage node to the client system;

F) updating the register in accordance with the data representing information items which were forwarded to the client system.

Needham, however, teaches **"maintaining by an indexer of each storage node a register indicative of whether the data representing the information item has previously been transmitted to the client system"** as "When a first user in the network wishes to make a file available for sharing with a second user such as a friend, the first user's system sends index information about the file (including a unique and "unguessable" identifier) to the second user's system. When the friend wishes to retrieve the file, the second user's system performs a local search on the second user's system to determine if the second user already has the file. If not, the second user's system makes a request for the selected file according to its identifier (e.g., "who has a copy of file 12345?") from his or her friends via their systems. If the immediate friends do not have the selected file, the friends' systems forward the request on to their friends within the network and so on. Requests may be made to various nodes of the network

rather than directly to the creator of the file because a system (e.g., network node) that is "closer" (in the social sense) to the requester than the creator of the file may have a copy of the file and can forward it more easily or more efficiently, because the creator of the file may have deleted the file from the creator's system, or because the network topology may have changed " (Paragraph 15) and “In the example of FIG. 1, Bob's index information packet for Bob's photograph has a DFC field of 0, Andy's index information packet for the photograph has a DFC field of 1 (reflecting the transfer of the index information from Bob to Andy), and Fred's index information packet for the same photograph has a DFC field of 3 (because that index came through June, Mary, and Bob)” (Paragraph 19), **“forwarding data representing information items which have not previously been transmitted to the client system from the storage node to the client system”** as "When a first user in the network wishes to make a file available for sharing with a second user such as a friend, the first user's system sends index information about the file (including a unique and "unguessable" identifier) to the second user's system. When the friend wishes to retrieve the file, the second user's system performs a local search on the second user's system to determine if the second user already has the file. If not, the second user's system makes a request for the selected file according to its identifier (e.g., "who has a copy of file 12345?") from his or her friends via their systems. If the immediate friends do not have the selected file, the friends' systems forward the request on to their friends within the network and so on. Requests may be made to various nodes of the network rather than directly to the creator of the file because a system (e.g., network node) that is "closer" (in the social sense) to the requester than the creator of the file may have a copy of the file and can forward it more easily or more efficiently, because the creator of the file may have deleted the file from the creator's system, or because the network topology may have changed " (Paragraph 15), and **“updating the register in accordance with the data representing information items which were forwarded to the client system”** as “In the example of FIG. 1, Bob's index information packet for Bob's photograph has a DFC field of 0, Andy's index information packet for the photograph has a DFC field of 1 (reflecting the transfer of the index information from Bob to Andy), and Fred's index

information packet for the same photograph has a DFC field of 3 (because that index came through June, Mary, and Bob)" (Paragraph 19).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Needham's** would have allowed **Fanning's** to provide a method to reduce bottlenecking when forwarding file requests in a distributed network, as noted by **Needham** (Paragraph 06).

Fanning and **Needham** do not explicitly teach:

G) generating a node position in respect of each information item represented by said received data by said client system responsive to the data representing the information item received from the indexer of the storage node.

Kohonen, however, teaches **"generating a node position in respect of each information item represented by said received data by said client system responsive to the data representing the information item received from the indexer of the storage node"** as "With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582, Section C: Formation of the Document Map), "This time includes finding the keywords to label the map, forming the WWW-ages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map), and "Given a search description, the matching units are found from the index and the best matches are returned and displayed as circles on the map" (Page 584, Section 2: Keyword Search).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Kohonen 's** would have allowed **Fanning's** and **Needham's** to provide a method for help a client understand the true meaning of individual texts and finding information of the highest interest, as noted by **Kohonen** (Section: Introduction).

Regarding claim 21, **Fanning** teaches a method comprising:

B) said method comprising the steps of: storing a plurality of information items (Column 5, lines 13-40); and

C) generating data representing the information items (Column 13, lines 6-24);

D) the data representing the information items, when stored, requiring less storage capacity than a corresponding information item (Column 13, lines 6-24);

The examiner notes that **Fanning** teaches **"said method comprising the steps of: storing a plurality of information items"** as "It should be understood in this description that although only two distribution applications 10, 12 communicating with each other are explicitly discussed, any number of distribution applications may be utilized in the system of the present invention. This is shown in FIG. 2 wherein a plurality of client servers, each denoted as C/S 12, are connected to one another in a system. As shown in FIG. 2, once a C/S 12 downloads a file from another C/S 12, it is able to distribute the file downloaded to other C/S 12 applications in the system. The particular components within system of the present invention will now be discussed" (Column 5, lines 29-40). The examiner further notes that **Fanning** teaches **"generating data representing the information items"** as "In an alternative embodiment shown in FIG. 9, the distribution application 1100 contains an audio file module 1102, which includes an audio file player 1106, as well as an audio file converter 1104. The audio file player 1106 plays files located in the data file repository 1116, while the audio file converter 1104 generates audio files either by sampling data from a microphone or tape, or by converting data stored on a CD-ROM or hard disk into a standard compressed audio file format. Converted audio files are placed in the repository 1116, allowing other users in the community to access these new audio files. In addition, the distribution application 1100 may also contain a video file module 1108, which includes a video file player 1111, as well as a video file converter 1110. Much as in the audio example above, video images (either still, or full motion) are converted from external sources to compressed standard formats and are placed in the repository 1116. Likewise, video files in the repository 1116 are displayed to the user by the video file player 1111" (Column 13, lines 6-24). The examiner further notes that **Fanning**

teaches **"the data representing the information items, when stored, requiring less storage capacity than a corresponding information item"** as "In an alternative embodiment shown in FIG. 9, the distribution application 1100 contains an audio file module 1102, which includes an audio file player 1106, as well as an audio file converter 1104. The audio file player 1106 plays files located in the data file repository 1116, while the audio file converter 1104 generates audio files either by sampling data from a microphone or tape, or by converting data stored on a CD-ROM or hard disk into a standard compressed audio file format. Converted audio files are placed in the repository 1116, allowing other users in the community to access these new audio files. In addition, the distribution application 1100 may also contain a video file module 1108, which includes a video file player 1111, as well as a video file converter 1110. Much as in the audio example above, video images (either still, or full motion) are converted from external sources to compressed standard formats and are placed in the repository 1116. Likewise, video files in the repository 1116 are displayed to the user by the video file player 1111" (Column 13, lines 6-24).

Fanning does not explicitly teach:

E) maintaining by an indexer of each storage node a register indicative of whether the data representing the information item has previously been transmitted to the client system;

F) forwarding data representing information items which have not previously been transmitted to the client system to be forwarded to the client system; and

G) updating the register in accordance with the data representing information items which were forwarded to the client system.

Needham, however, teaches **"maintaining by an indexer of each storage node a register indicative of whether the data representing the information item has previously been transmitted to the client system"** as "When a first user in the network wishes to make a file available for sharing with a second user such as a friend, the first user's system sends index information about the file (including a unique and "unguessable" identifier) to the second user's system. When the friend wishes to retrieve the file, the second user's system performs a local search on the second user's

system to determine if the second user already has the file. If not, the second user's system makes a request for the selected file according to its identifier (e.g., "who has a copy of file 12345?") from his or her friends via their systems. If the immediate friends do not have the selected file, the friends' systems forward the request on to their friends within the network and so on. Requests may be made to various nodes of the network rather than directly to the creator of the file because a system (e.g., network node) that is "closer" (in the social sense) to the requester than the creator of the file may have a copy of the file and can forward it more easily or more efficiently, because the creator of the file may have deleted the file from the creator's system, or because the network topology may have changed " (Paragraph 15) and “In the example of FIG. 1, Bob's index information packet for Bob's photograph has a DFC field of 0, Andy's index information packet for the photograph has a DFC field of 1 (reflecting the transfer of the index information from Bob to Andy), and Fred's index information packet for the same photograph has a DFC field of 3 (because that index came through June, Mary, and Bob)” (Paragraph 19), **“forwarding data representing information items which have not previously been transmitted to the client system to be forwarded to the client system”** as "When a first user in the network wishes to make a file available for sharing with a second user such as a friend, the first user's system sends index information about the file (including a unique and "unguessable" identifier) to the second user's system. When the friend wishes to retrieve the file, the second user's system performs a local search on the second user's system to determine if the second user already has the file. If not, the second user's system makes a request for the selected file according to its identifier (e.g., "who has a copy of file 12345?") from his or her friends via their systems. If the immediate friends do not have the selected file, the friends' systems forward the request on to their friends within the network and so on. Requests may be made to various nodes of the network rather than directly to the creator of the file because a system (e.g., network node) that is "closer" (in the social sense) to the requester than the creator of the file may have a copy of the file and can forward it more easily or more efficiently, because the creator of the file may have deleted the file from the creator's system, or because the network topology may have changed " (Paragraph

15), and **"updating the register in accordance with the data representing information items which were forwarded to the client system"** as "In the example of FIG. 1, Bob's index information packet for Bob's photograph has a DFC field of 0, Andy's index information packet for the photograph has a DFC field of 1 (reflecting the transfer of the index information from Bob to Andy), and Fred's index information packet for the same photograph has a DFC field of 3 (because that index came through June, Mary, and Bob)" (Paragraph 19).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Needham's** would have allowed **Fanning's** to provide a method to reduce bottlenecking when forwarding file requests in a distributed network, as noted by **Needham** (Paragraph 06).

Fanning and **Needham** do not explicitly teach:
A) said storage node being connectable via a data network to an information retrieval client system having logic, responsive to data received from the storage node, for generating a node position in respect of each information item represented by the received data.

Kohonen, however, teaches **"said storage node being connectable via a data network to an information retrieval client system having logic, responsive to data received from the storage node, for generating a node position in respect of each information item represented by the received data"** as "With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582, Section C: Formation of the Document Map), "This time includes finding the keywords to label the map, forming the WWW-ages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map), and "Given a search description, the matching units are found from the index and the best matches are returned and displayed as circles on the map" (Page 584, Section 2: Keyword Search).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Kohonen 's** would have allowed **Fanning's** and **Needham's** to provide a method for help a client understand the true meaning of individual texts and finding information of the highest interest, as noted by **Kohonen** (Section: Introduction).

Regarding claim 22, **Fanning** teaches a method comprising:
A) said client system being connectable via a data network to one or more information item storage nodes each comprising a store for storing a plurality of information items and an indexer (Column 5, lines 13-59)
B) the indexer configured to derive data representing an information item (Column 13, lines 6-24);
C) the data representing the information item, when stored, requiring less storage capacity than a corresponding information item (Column 13, lines 6-24);
D) transmitting the data representing the information item to the client system via the data network (Column 5, lines 13-40, Column 13, lines 6-24).

The examiner notes that **Fanning** teaches **"said client system being connectable via a data network to one or more information item storage nodes each comprising a store for storing a plurality of information items and an indexer"** as "FIG. 1 also shows a network 22 interconnected between the distribution applications 10, 12. As can be seen in FIG. 1, all distribution applications 10, 12 have the same functionality. One user's file transfer client 14 can download files from another user's file transfer server 20, and vice versa" (Column 5, lines 23-29) and "FIG. 3 illustrates the system of the present invention having a first distribution application 100 and a second distribution application 212, a file index server 300, and a file index 302. Each distribution application 100, 212 preferably includes: a file transfer client 114, 214; a data file repository 116, 216; a graphical user interface 118, 218; a file transfer server 120, 220 and an inventory module 130, 230. Preferably, the data file repository, or repository, 116 shown in FIG. 3 is where the all of the data files to be shared are stored. In the preferred embodiment, the data file repository 116 contains at least one directory

on disk drives in a personal computer. In an alternative embodiment, the data file repository 116 may be a database. In another embodiment, the repository 116 may be a network accessible disk drive that the distribution application 100 can access. Alternatively, the repository 116 can also be a collection of directories enabling the user to organize files by type, classification, or attribute" (Column 5, lines 42-59). The examiner notes that **Fanning** teaches **"the indexer configured to derive data representing an information item"** as "In an alternative embodiment shown in FIG. 9, the distribution application 1100 contains an audio file module 1102, which includes an audio file player 1106, as well as an audio file converter 1104. The audio file player 1106 plays files located in the data file repository 1116, while the audio file converter 1104 generates audio files either by sampling data from a microphone or tape, or by converting data stored on a CD-ROM or hard disk into a standard compressed audio file format. Converted audio files are placed in the repository 1116, allowing other users in the community to access these new audio files. In addition, the distribution application 1100 may also contain a video file module 1108, which includes a video file player 1111, as well as a video file converter 1110. Much as in the audio example above, video images (either still, or full motion) are converted from external sources to compressed standard formats and are placed in the repository 1116. Likewise, video files in the repository 1116 are displayed to the user by the video file player 1111" (Column 13, lines 6-24). The examiner further notes that **Fanning** teaches **"the data representing the information item, when stored, requiring less storage capacity than a corresponding information item"** as "In an alternative embodiment shown in FIG. 9, the distribution application 1100 contains an audio file module 1102, which includes an audio file player 1106, as well as an audio file converter 1104. The audio file player 1106 plays files located in the data file repository 1116, while the audio file converter 1104 generates audio files either by sampling data from a microphone or tape, or by converting data stored on a CD-ROM or hard disk into a standard compressed audio file format. Converted audio files are placed in the repository 1116, allowing other users in the community to access these new audio files. In addition, the distribution application 1100 may also contain a video file module 1108, which includes a video file player

1111, as well as a video file converter 1110. Much as in the audio example above, video images (either still, or full motion) are converted from external sources to compressed standard formats and are placed in the repository 1116. Likewise, video files in the repository 1116 are displayed to the user by the video file player 1111" (Column 13, lines 6-24). The examiner further notes that **Fanning** teaches **"transmitting the data representing the information item to the client system via the data network"** as "FIG. 1 also shows a network 22 interconnected between the distribution applications 10, 12. As can be seen in FIG. 1, all distribution applications 10, 12 have the same functionality. One user's file transfer client 14 can download files from another user's file transfer server 20, and vice versa" (Column 5, lines 23-29) and "In an alternative embodiment shown in FIG. 9, the distribution application 1100 contains an audio file module 1102, which includes an audio file player 1106, as well as an audio file converter 1104. The audio file player 1106 plays files located in the data file repository 1116, while the audio file converter 1104 generates audio files either by sampling data from a microphone or tape, or by converting data stored on a CD-ROM or hard disk into a standard compressed audio file format. Converted audio files are placed in the repository 1116, allowing other users in the community to access these new audio files. In addition, the distribution application 1100 may also contain a video file module 1108, which includes a video file player 1111, as well as a video file converter 1110. Much as in the audio example above, video images (either still, or full motion) are converted from external sources to compressed standard formats and are placed in the repository 1116. Likewise, video files in the repository 1116 are displayed to the user by the video file player 1111" (Column 13, lines 6-24).

Fanning does not explicitly teach:

F) maintaining by an indexer of each storage node a register indicative of whether the data representing the information item has previously been transmitted to the client system;

G) forwarding data representing information items which have not previously been transmitted to the client system to be forwarded to the client system; and

H) updating the register in accordance with the data representing information items which were forwarded to the client system.

Needham, however, teaches **"maintaining by an indexer of each storage node a register indicative of whether the data representing the information item has previously been transmitted to the client system"** as "When a first user in the network wishes to make a file available for sharing with a second user such as a friend, the first user's system sends index information about the file (including a unique and "unguessable" identifier) to the second user's system. When the friend wishes to retrieve the file, the second user's system performs a local search on the second user's system to determine if the second user already has the file. If not, the second user's system makes a request for the selected file according to its identifier (e.g., "who has a copy of file 12345?") from his or her friends via their systems. If the immediate friends do not have the selected file, the friends' systems forward the request on to their friends within the network and so on. Requests may be made to various nodes of the network rather than directly to the creator of the file because a system (e.g., network node) that is "closer" (in the social sense) to the requester than the creator of the file may have a copy of the file and can forward it more easily or more efficiently, because the creator of the file may have deleted the file from the creator's system, or because the network topology may have changed " (Paragraph 15) and "In the example of FIG. 1, Bob's index information packet for Bob's photograph has a DFC field of 0, Andy's index information packet for the photograph has a DFC field of 1 (reflecting the transfer of the index information from Bob to Andy), and Fred's index information packet for the same photograph has a DFC field of 3 (because that index came through June, Mary, and Bob)" (Paragraph 19), **"forwarding data representing information items which have not previously been transmitted to the client system to be forwarded to the client system"** as "When a first user in the network wishes to make a file available for sharing with a second user such as a friend, the first user's system sends index information about the file (including a unique and "unguessable" identifier) to the second user's system. When the friend wishes to retrieve the file, the second user's system performs a local search on the second user's system to determine if the second user already has

the file. If not, the second user's system makes a request for the selected file according to its identifier (e.g., "who has a copy of file 12345?") from his or her friends via their systems. If the immediate friends do not have the selected file, the friends' systems forward the request on to their friends within the network and so on. Requests may be made to various nodes of the network rather than directly to the creator of the file because a system (e.g., network node) that is "closer" (in the social sense) to the requester than the creator of the file may have a copy of the file and can forward it more easily or more efficiently, because the creator of the file may have deleted the file from the creator's system, or because the network topology may have changed " (Paragraph 15), and **"updating the register in accordance with the data representing information items which were forwarded to the client system"** as "In the example of FIG. 1, Bob's index information packet for Bob's photograph has a DFC field of 0, Andy's index information packet for the photograph has a DFC field of 1 (reflecting the transfer of the index information from Bob to Andy), and Fred's index information packet for the same photograph has a DFC field of 3 (because that index came through June, Mary, and Bob)" (Paragraph 19).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Needham's** would have allowed **Fanning's** to provide a method to reduce bottlenecking when forwarding file requests in a distributed network, as noted by **Needham** (Paragraph 06).

Fanning and **Needham** do not explicitly teach:

E) said method comprising: generating a node position in respect of each information item represented by said received data responsive to the data representing the information item received from said indexer of a storage node.

Kohonen, however, teaches **"said method comprising: generating a node position in respect of each information item represented by said received data responsive to the data representing the information item received from said indexer of a storage node"** as "With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor

SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582, Section C: Formation of the Document Map), "This time includes finding the keywords to label the map, forming the WWW-ages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map), and "Given a search description, the matching units are found from the index and the best matches are returned and displayed as circles on the map" (Page 584, Section 2: Keyword Search).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Kohonen 's** would have allowed **Fanning's** and **Needham's** to provide a method for help a client understand the true meaning of individual texts and finding information of the highest interest, as noted by **Kohonen** (Section: Introduction).

Regarding claim 23, **Fanning** further teaches a method comprising:
A) A computer readable medium including computer executable instructions, wherein the instructions, when executed by a processor, cause the processor to perform according to any one of claims 20 to 22 (Column 5, lines 42-53).

The examiner notes that **Fanning** teaches **"Computer software comprising program code for carrying out a method according to any one of claims 20 to 22"** as "FIG. 3 illustrates the system of the present invention having a first distribution application 100 and a second distribution application 212, a file index server 300, and a file index 302. Each distribution application 100, 212 preferably includes: a file transfer client 114, 214; a data file repository 116, 216; a graphical user interface 118, 218; a file transfer server 120, 220 and an inventory module 130, 230. Preferably, the data file repository, or repository, 116 shown in FIG. 3 is where the all of the data files to be shared are stored. In the preferred embodiment, the data file repository 116 contains at least one directory on disk drives in a personal computer" (Column 5, lines 42-53).

Regarding claim 27, **Fanning** further teaches a method comprising:

A) wherein the data is metadata derived from the information item (Column 10, lines 34-36).

The examiner notes that **Fanning** teaches **"wherein the data is metadata derived from the information item"** as "The index server also optionally stores information for each file description such as: filename; file data type (text, audio, images, video, etc)" (Column 10, lines 34-36).

Regarding claim 28, **Fanning** and **Needham** do not explicitly teach a system comprising:

A) wherein the data is the information item with all the stop words removed.

Kohonen, however, teaches **"wherein the data is the information item with all the stop words removed"** as " The words occurring less than 50 times in the whole corpus, as well as a set of common words in a stopword list of 1335 words were removed. The remaining vocabulary consisted of 43 222 words. Finally, we omitted the 122 524 abstracts in which less than five words remained" (Page 581).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Kohonen 's** would have allowed **Fanning's** and **Needham's** to provide a method for help a client understand the true meaning of individual texts and finding information of the highest interest, as noted by **Kohonen** (Section: Introduction).

Regarding claim 29, **Fanning** and **Needham** do not explicitly teach a system comprising:

A) wherein the data is a list of all stem words included in the information item.

Kohonen, however, teaches **"wherein the data is a list of all stem words included in the information item"** as " All words were converted to their base form using a stemmer" (Page 581).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Kohonen 's** would have allowed **Fanning's** and **Needham's** to provide a method for

help a client understand the true meaning of individual texts and finding information of the highest interest, as noted by **Kohonen** (Section: Introduction).

Regarding claim 30, **Fanning** and **Needham** do not explicitly teach a system comprising:

A) wherein the data is a feature vector derived from the metadata.

Kohonen, however, teaches **"wherein the data is a feature vector derived from the metadata"** as "Any of the basic projection methods also can be used to organize textual data items, such as documents, if their contents are described statistically as some kind of metric feature vectors. For instance, if the collection of words used in a document is described as a histogram, the latter can serve as the input feature vector on the basis of which the document collection can be organized" (Page 574).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Kohonen 's** would have allowed **Fanning's** and **Needham's** to provide a method for help a client understand the true meaning of individual texts and finding information of the highest interest, as noted by **Kohonen** (Section: Introduction).

Response to Arguments

9. Applicant's arguments with respect to claims 1-23 and 27-30 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 02/20/2009 have been fully considered but they are not persuasive.

Applicants argue on page 11 that **"it is respectfully submitted that the correct test for subject matter eligibility is the machine or transformation test described in In re Bilski. In the present Case, Claim 21 is amended to be tied to a particular machine or apparatus, namely a storage node including an indexer and a client system. Consequently, it is respectfully submitted that Claim 21 (and Claim 23 dependent therefrom) is in compliance with all requirements under 35 U.S.C. 101"**. However, Claim 21 contains the limitation of **"logic"**, which is nonstatutory

subject matter in and of itself. Because Claim 21 contains nonstatutory subject matter, the 101 rejection is proper.

Applicants argue on page 12 that **"The outstanding Office Action appears to be interpreting the file index server 200 of Fanning as being the same as the indexer as recited in Claim 20...Fanning merely discloses the use of one file index server...Claim 20 recites that each storage node (distribution application as interpreted by the Office Action) comprises a respective indexer, so that there are as many indexers as there are storage nodes In contrast, Fanning merely discloses the use of one file index server"**. However, the examiner wishes to refer to Columns 05 and 13 of **Fanning** which state "As can be seen in FIG. 1, all distribution applications 10, 12 have the same functionality. One user's file transfer client 14 can download files from another user's file transfer server 20, and vice versa" (Column 5, lines 26-28), "FIG. 3 illustrates the system of the present invention having a first distribution application 100 and a second distribution application 212, a file index server 300, and a file index 302. Each distribution application 100, 212 preferably includes: a file transfer client 114, 214; a data file repository 116, 216; a graphical user interface 118, 218; a file transfer server 120, 220 and an inventory module 130, 230. Preferably, the data file repository, or repository, 116 shown in FIG. 3 is where the all of the data files to be shared are stored. In the preferred embodiment, the data file repository 116 contains at least one directory on disk drives in a personal computer. In an alternative embodiment, the data file repository 116 may be a database. In another embodiment, the repository 116 may be a network accessible disk drive that the distribution application 100 can access. Alternatively, the repository 116 can also be a collection of directories enabling the user to organize files by type, classification, or attribute" (Column 5, lines 42-59), and "In an alternative embodiment shown in FIG. 9, the distribution application 1100 contains an audio file module 1102, which includes an audio file player 1106, as well as an audio file converter 1104. The audio file player 1106 plays files located in the data file repository 1116, while the audio file converter 1104 generates audio files either by sampling data from a microphone or tape, or by

converting data stored on a CD-ROM or hard disk into a standard compressed audio file format. Converted audio files are placed in the repository 1116, allowing other users in the community to access these new audio files. In addition, the distribution application 1100 may also contain a video file module 1108, which includes a video file player 1111, as well as a video file converter 1110. Much as in the audio example above, video images (either still, or full motion) are converted from external sources to compressed standard formats and are placed in the repository 1116. Likewise, video files in the repository 1116 are displayed to the user by the video file player 1111" (Column 13, lines 6-24). The examiner further wishes to state that the claimed indexer is merely defined as to "derive data representing an information item". The examiner further wishes to state that the repositories in each client of **Fanning** contain directories which house the downloadable files. Because the directories represent information items, the claimed indexer is taught by **Fanning**.

Applicants argue on page 14 that **"the proposed combination does not teach or suggest "a storage node"..."a node position generating unit"**. However, the examiner wishes to refer to page 584 of **Kohonen** which states "With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582, Section C: Formation of the Document Map), "This time includes finding the keywords to label the map, forming the WWW-ages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map), and "Given a search description, the matching units are found from the index and the best matches are returned and displayed as circles on the map" (Page 584, Section 2: Keyword Search). The examiner further wishes to state that the SOM of **Kohohen** clearly teaches the node generation unit as a SOM of **Kohonen** contains nodes representing index items. Moreover, the examiner wishes to refer to Column 5 of **Fanning** which states It should be understood in this description that although only two distribution applications 10, 12 communicating with each other are explicitly discussed, any number of distribution applications may be utilized in the system of the present invention. This is shown in FIG.

2 wherein a plurality of client servers, each denoted as C/S 12, are connected to one another in a system. As shown in FIG. 2, once a C/S 12 downloads a file from another C/S 12, it is able to distribute the file downloaded to other C/S 12 applications in the system. The particular components within system of the present invention will now be discussed" (Column 5, lines 29-40). The examiner further wishes to state that each peer in a P2P network is a storage node. Moreover, because the repositories of each peer house downloadable information items available to other peers, then the claimed storage node is clearly taught.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,636,862 issued to **Lundahl et al.** on 21 October 2003. The subject matter disclosed therein is pertinent to that of claims 1-23, and 27-30 (e.g., methods to use SOM mapping).

U.S. PGPUB 2003/0208485 issued to **Castellanos** on 06 November 2003. The subject matter disclosed therein is pertinent to that of claims 1-23, and 27-30 (e.g., methods to use SOM mapping).

U.S. Patent 7,017,186 issued to **Day** on 21 March 2006. The subject matter disclosed therein is pertinent to that of claims 1-23, and 27-30 (e.g., methods to use SOM mapping).

U.S. Patent 7,440,994 issued to **Harrow et al.** on 21 October 2008. The subject matter disclosed therein is pertinent to that of claims 1-23, and 27-30 (e.g., methods to use SOM mapping).

Article entitled "Interfaces for Palmtop Image Search" by **Dertick**, dated July 2002. The subject matter disclosed therein is pertinent to that of claims 1-23, and 27-30 (e.g., methods to use SOM mapping).

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mahesh Dwivedi whose telephone number is (571) 272-2731. The examiner can normally be reached on Monday to Friday 8:20 am – 4:40 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo can be reached (571) 272-3642. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mahesh Dwivedi
Patent Examiner
Art Unit 2168

June 03, 2009
/Mahesh H Dwivedi/
Examiner, Art Unit 2168

/Tim T. Vo/

Supervisory Patent Examiner, Art Unit 2168